



Transaction Overview of the
Metropolitan Highway System Fixed-Rate Refunding Bonds

and

Summary of Proposed Master Trust Agreement Amendments

Why Do This Now?

- Bonds were originally issued by the Turnpike Authority in 1997 and advance refunded in 2010. We have a one-time historic opportunity to current-refund the original bonds for a significant savings.
- Optimal market conditions exist for MassDOT to issue current refunding MHS bonds for substantial savings:
 - Approximately \$830 million of senior and subordinate lien bonds
 - **Approximately \$161 million in net present value savings (NPV); \$10 million in savings annually**
 - Annual savings available to further support the capital needs of the MHS and related projects (Allston)
- Savings from this transaction (around \$10 million annually) can further support additional capital needs for the MHS and Allston project.
- This refunding **does not impact/change/amend** toll rates (determined by the Board) or toll locations (restricted by statute).

Overview of Refunding Transaction¹

- MassDOT is planning on issuing fixed-rate current refunding bonds
 - \$495 million in Metropolitan Highway System (Senior) 2019 Series A
 - \$206 million in Metropolitan Highway System (Subordinated) Commonwealth Contract Assistance 2019 Series C
 - ❖ Price late September/early October
 - ❖ Close early/mid October
 - Currently refund \$593.285 million of 2010 Series B Senior Lien Bonds
 - Currently refund \$238.210 million of 2010 Series B Subordinated Lien Bonds
 - Refunding bonds match maturity of current bonds (January 2037)
- Total projected savings = \$161.6 million (conservative basis) on a net present value basis
 - Structured so annual savings roughly the same over the life of the bonds
- Transaction may provide opportunity to continue de-risking strategy on VRDO portfolio
- Call date on refunded bonds is January 1, 2020

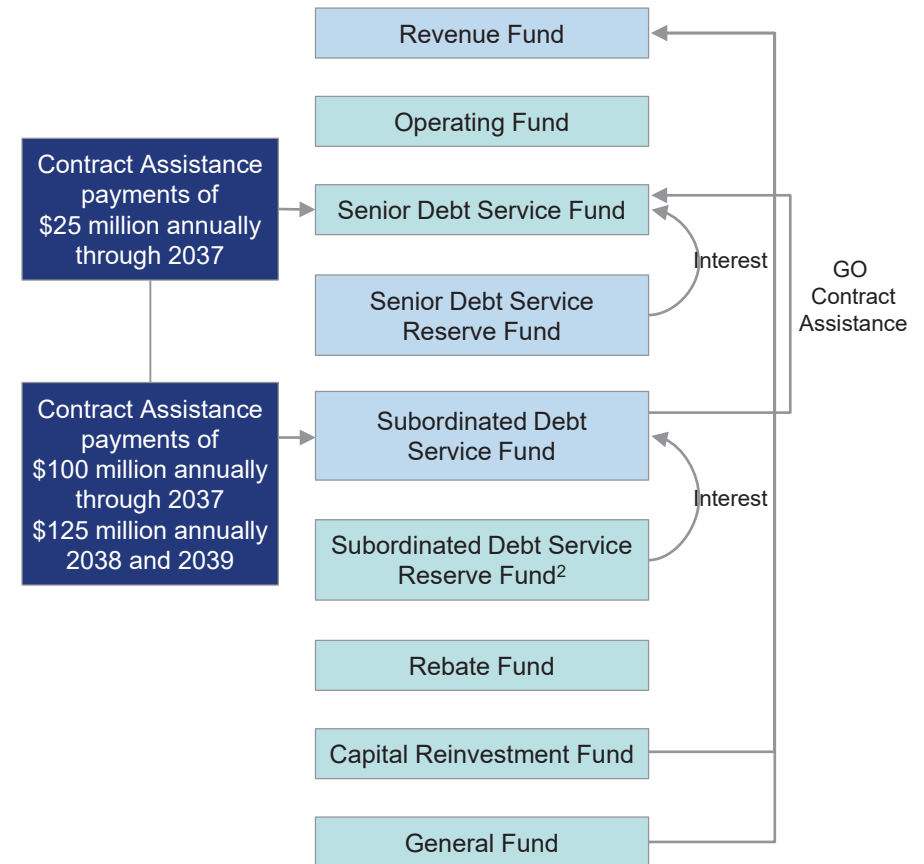
¹ Based on rates as of COB 6/28/2019, preliminary and subject to change.

Commonwealth GO Payments Applied Directly to Debt Service

Commonwealth Contract Assistance Payments effectively reduce Net Debt Service to zero on the Subordinate MHS Bonds

- Pursuant to the GO Contract, the Commonwealth pays MassDOT \$100 million annually, through budgeting to the CTF, in 12 monthly installments, no later than the 15th day of each month, commencing in July of each fiscal year
- Such Contract Assistance payments are 'Dedicated Payments' under the Trust Agreement applied first to the Subordinated Bond Debt Service Fund until the Subordinated Net Debt Service amount is reduced to zero
- Excess Contract Assistance, not needed on the Subordinate Lien, is deposited in the Senior Debt Service Fund
- An additional \$25 million in Contract Assistance (1999 Contract) are Dedicated Payments directly deposited to the Senior Debt Service Fund and available to pay other Subordinated Debt Service in 2038 and 2039
- Subordinate Lien debt service is fully covered by Contract Assistance payments as depicted on the following slide
- Contract Assistance payments are a general obligation of the Commonwealth (Aa1 / AA / AA+)¹

MHS Flow-of-Funds

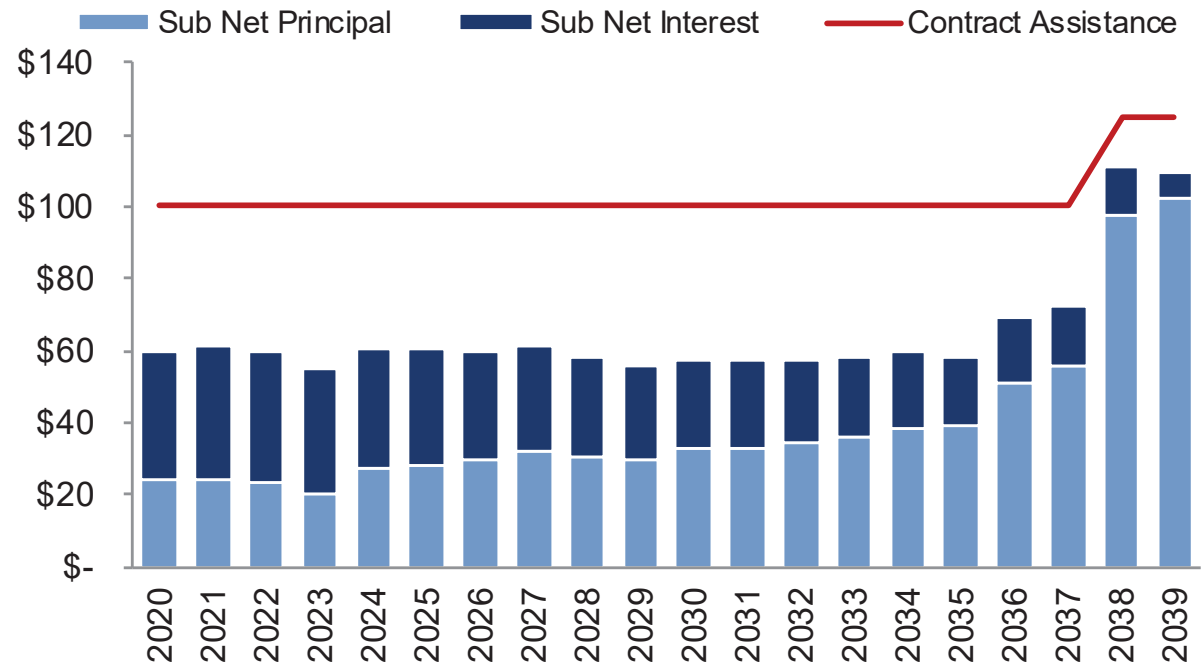


1. Moody's Aa1 rating affirmed; S&P AA rating affirmed on; Fitch AA+ rating affirmed. August 22, 2019.
2. Subordinated Debt Service Reserve Fund was released and set to Zero dollars; so no earnings are transferred.

MHS Debt Profile – Subordinate Liens

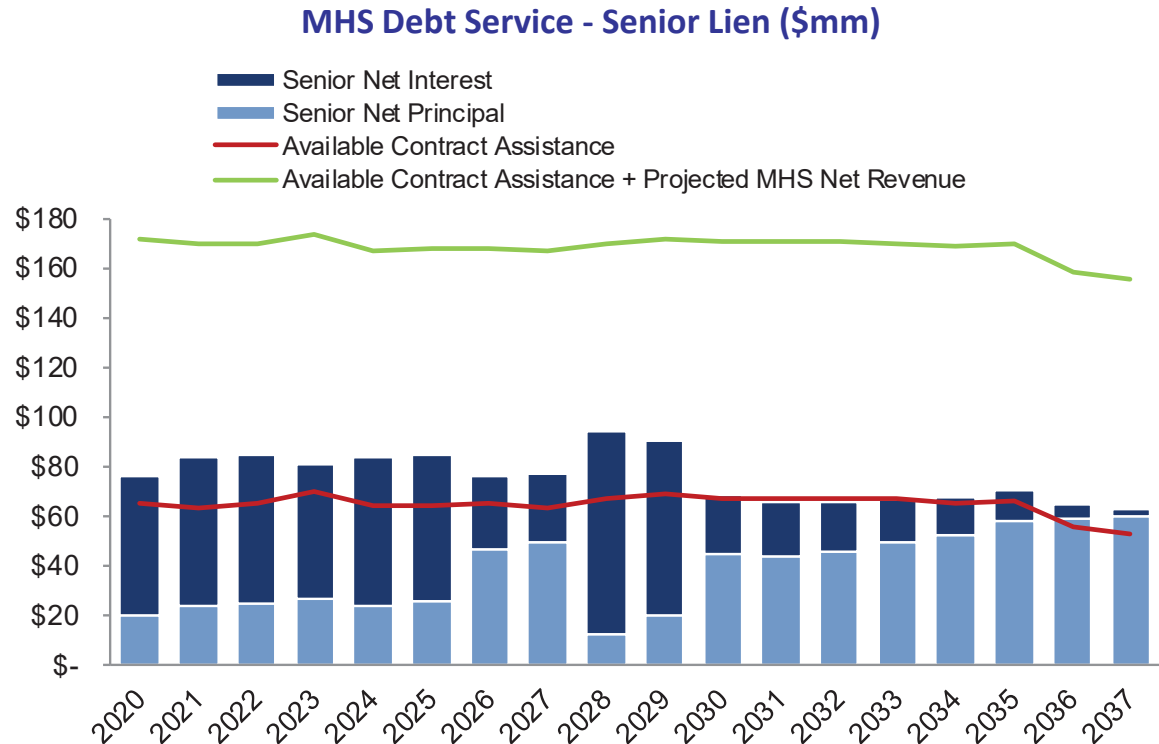
MHS Debt Service - Subordinate Lien (\$mm)

- Commonwealth Contract Assistance is pledged to Subordinate Lien and covers 100% debt service in every year
- Subordinate Lien debt service is expected to remain well below Dedicated Contract Assistance every year
- Capital structure fully amortizes by 2039
- \$206.1 million fixed rate current refunding of outstanding/callable Series 2010B fixed rate bonds for NPV savings of \$42.1 million (\$17.7%)



MHS Debt Profile – Senior Liens

- The Senior Lien is partially covered by a \$25 million pledge of Commonwealth Contract Assistance plus the excess transferred from the Subordinate Lien
- Capital structure fully amortizes by 2037
- \$494.3 million fixed rate current refunding of outstanding/callable Series 2010B fixed rate bonds for NPV savings of \$119.5 million (\$20.1%)
- Senior Lien refunding bonds will maintain a DSRF funded to the reserve requirement
- Senior Lien coverage enhanced by increased projected Contract Assistance flow-through



Master Trust Agreement

- The scope of the refunding transaction allows MassDOT the opportunity to update the existing 1997 MHS Master Trust Agreement by consent of the majority of bondholders.
- The 1997 Trust Agreement, now 22 years old, is substantially unchanged and outdated, and does not reflect the current state of MassDOT or the MHS.
- Proposed changes include:
 - Modernization: electronic notifications (instead of by mail), updates to MassDOT's current enabling legislation (MassDOT instead of Turnpike Authority), inclusion of Tobin Bridge in MHS (Tobin revenues not pledged as part of current refunding transaction), addition of multi-modal facilities as part of MHS
 - Technical Corrections: Debt service and reserve requirements (permits inclusion of Commonwealth contract assistance payments as offset to debt service payment or pledge of other non-toll revenues for debt service)
 - Future Flexibility: Ability to capture and pledge non-toll revenues or other payments from outside entities (e.g. federal government, non-governmental, third parties or other state entities) for current and future MHS capital needs and ability to issue subordinate debt or a TIFIA loan in the future if state law permits

Current state law does not authorize new money MHS borrowings; any future new money borrowing or pledge of funds (including third-party) would also require legislative authorization

Appendix

- Expected Summary of Refunding
- MHS System Overview
- MHS System Map

Summary of Refunding¹

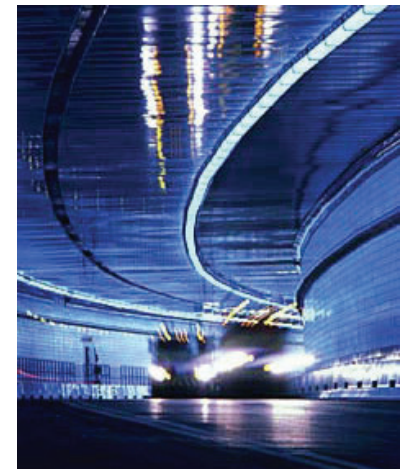
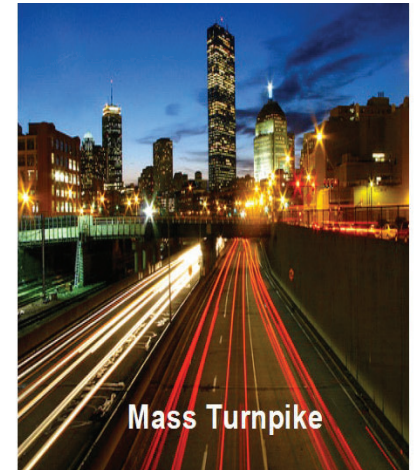
	MHS Revenue Refunding Bonds (Senior), 2019 Series A	MHS Revenue Refunding Bonds (Subordinate), 2019 Series C	Total
Dated Date	10/09/2019	10/09/2019	10/09/2019
Delivery Date	10/09/2019	10/09/2019	10/09/2019
Arbitrage Yield	2.057163%	2.057163%	2.057163%
Escrow Yield	2.057161%	2.057156%	2.057160%
Value of Negative Arbitrage	1.57	3.76	5.33
Bond Par Amount	494,285,000.00	206,105,000.00	700,390,000.00
True Interest Cost	2.633257%	2.533964%	2.607079%
Net Interest Cost	2.970022%	2.869810%	2.943708%
Average Coupon	5.000000%	5.000000%	5.000000%
Average Life	9.882	8.439	9.458
Par amount of refunded bonds	593,285,000.00	238,210,000.00	831,495,000.00
Average coupon of refunded bonds	4.983902%	4.984371%	4.984022%
Average life of refunded bonds	9.879	8.435	9.465
PV of prior debt	753,291,743.64	293,596,374.70	1,046,888,118.33
Net PV Savings	119,488,329.11	42,082,839.99	161,571,169.10
Percentage savings of refunded bonds	20.140123%	17.666278%	19.431406%
Percentage savings of refunding bonds	24.173974%	20.418156%	23.068743%

¹ Information provided by Citigroup. Based on rates as of COB 6/28/2019, preliminary and subject to change.

Metropolitan Highway System & All Electronic Tolling

MHS has experienced strong traffic volumes and operating performance. Implementation of AET in October 2016 was smooth and performance has been better than projected.

- MHS is the east-west spine of the regional transportation system
- Includes a diverse set of facilities: highways, tunnels and bridges
- Tolled facilities within the MHS include:
 - Ted Williams Tunnel (opened in December 1995)
 - Sumner/Callahan Tunnel system
 - Boston Extension (Route 128 to the I-90/I-93 interchange)
- Stable and strong traffic profile
 - Boston Extension: 4.4% compounded annual revenue growth in the last 10 years
 - Tunnels: 4.0% compounded revenue growth in the last 10 years
- Tobin Bridge toll revenues and expenses are accounted for separately and not included in the MHS Trust Agreement
- MHS does not include the Western Turnpike, which runs from the New York border to Route 128 and is a separate bond credit
- With the 2016 conversion to AET, Mass DOT achieved end-to-end E-ZPass MA passenger car tolls on the Turnpike, moved the toll locations on the MassDOT toll facilities, and increased the charge on Pay by Plate customers



MHS System Map

